WALTER REED NATIONAL MILITARY MEDICAL CENTER
CONSENT TO PARTICIPATE IN RESEARCH

Principal Investigator: Susan E. Hinman, CDR, DC, USN, Endodontics, NPDS, WRNMMC, (301) 319-4676

Key Information: Your voluntary consent to participate in this research study is being requested because you have a tooth requiring root canal treatment. This study will evaluate if either 800mg ibuprofen, a non-steroidal anti-inflammatory drug (NSAID), or 40mg methylprednisolone, a steroid drug, increases the effectiveness of the inferior alveolar nerve block (IANB), also called a lower posterior tooth nerve block. This nerve block is used to numb the portion of the mouth where the dental procedure will occur. You will be thoroughly screened for any medical conditions you may have which would preclude using either of these medications. However, in a very small group of patients, ibuprofen may cause prolong bleeding and methylprednisolone has the potential to cause mouth ulcers and/or an upset stomach. However, we are administering a single dose of these medications and there is no known expected harm from one dose of either ibuprofen or methylprednisolone for those eligible to participate in this research. Taking either of these medications will not affect the outcome or your root canal treatment.

Recent clinical trials have shown the success of the lower tooth nerve block to be as low as 25% in patients with tooth pain caused by inflammation of pulp (the nerve and tissue inside the tooth) which is also called pulpitis. Our research is based off of recent studies indicating that ibuprofen enhances the effectiveness of local anesthetics in patients with pulpitis, raising the lower tooth nerve block success to 65%. Our goal is to test whether a steroid would provide an even greater benefit. By participating in this study, there is a possibility that you could receive greater pain relief both during, and after completion of your procedure. The information gathered may help us learn and provide benefits to future patients. You may choose to participate, or not participate, in this study.

PROTOCOL TITLE: Comparative Evaluation of Preoperative Methylprednisolone or Ibuprofen on Anesthetic Efficacy of Inferior Alveolar Nerve Blocks in Patients with Symptomatic Irreversible Pulpitis

You may be eligible to take part in this research study. This form gives you important information about the study. Please take time to review this information carefully. You should talk to the researchers about the study and ask them any questions you have. You may also wish to talk to others (for example, your friends, family, or personal physician) about participation in this study. If you decide to take part in this research study, you will be asked to sign this document. Before you sign this document, be sure you understand what the research study is about, including the risks and possible benefits to you.

Please tell these researchers if you are taking part in another research study.

Your participation is voluntary. You do not have to take part if you do not want to. You may also leave the research study at any time. If you choose not to take part in this research study or

if you leave the study before it is finished, there will be no penalty. Your decision will not affect your future care at the Naval Postgraduate Dental School (NPDS).

1. WHAT IS THE PURPOSE AND DURATION OF THIS RESEARCH AND WHO WILL TAKE PART?

You are being asked to participate in a randomized clinical trial and research study entitled "Comparative Evaluation of Preoperative Oral Methylprednisolone or Ibuprofen on Anesthetic Efficacy of Inferior Alveolar Nerve Block in Patients with Irreversible Pulpitis" at NPDS, Walter Reed National Military Medical Center (WRNMMC) because you have a qualifying lower posterior tooth, in need of root canal therapy. The IANB, or lower posterior tooth nerve block, used to numb the portion of the mouth where the dental procedure will occur.

The purpose of this research study is to compare the effectiveness of either 800mg ibuprofen, or 40mg methylprednisolone, a steroid, on anesthetic effectiveness of the lower posterior tooth nerve block in patients with painful, irreversible pulpitis. To see how well a one-time oral dose of either ibuprofen or methylprednisolone works before starting your root canal, you will be asked to rate your tooth pain before, at various times during, and up to 48 hours after the procedure is completed. Taking the oral medication and the rating of your tooth pain are the experimental parts of this study. Your root canal treatment will be performed in exactly the same manner if you did not agree to participate in the study.

This study will be conducted at NPDS and is designed to be completed after turning a pain journal which you will be provided with. Study participation will increase your initial appointment time by about 60 minutes. Regardless of participating or not participating in this study, patients presenting with a painful tooth usually require more than 1 appointment to complete treatment. You will have to return for a follow-up visit which is usually scheduled 7-10 days later. At that time you will turn in your pain journal completing your study participation. A total of 100 subjects are expected to take part in this study.

2. WHAT WILL HAPPEN IF YOU DECIDE TO BE IN THIS RESEARCH?

If you agree to participate in this study you will be asked to read, initial and sign this document explaining the procedure. This will take about 15 minutes. You will be asked to rate your pain on a visual analog scale (VAS) and be assigned to one of the 2 medication groups. You will be given 4, unmarked identical tablets 45 minutes before administering a lower posterior nerve block to numb your tooth. Fifteen minutes after administering the nerve block you will be tested for profound lip numbness. If lip numbness is not achieved, you will be excused from the study, given more anesthetic, and your root canal treatment completed.

If you have lip numbness, you will go on to complete the study. Throughout the procedure, you will be encouraged to alert the provider if pain occurs. If this occurs, the procedure will be stopped. The location (enamel, dentin, access or instrumentation) of the pain will be noted and you will rate the pain using a VAS. Additional anesthesia will be administered to decrease your pain and treatment continued. At the completion of this appointment, which should be about 2 hours, you will be given a pain journal to record any discomfort on VAS scales at 6, 12, 24, and

48 hours later. You will be asked to return this journal at your next visit.

Obturation of your root canal (completion of treatment) may or may not be accomplished in one appointment. Thorough removal of the nerve/pulp tissue and disinfection of inside the tooth, the initial phase of root canal treatment, is acceptable. You will be scheduled to have the root canal completed at a later date. Regardless of how many appointments it takes to complete your treatment, you will complete your participation in the study when you turn in your completed pain journal given to you following the first appointment.

This research study is a double blind study, which means that neither you nor the research team will know which oral medication you received. In the event of an emergency, there is a way to find out if you received ibuprofen or methylprednisolone.

3. WHAT ARE THE RISKS OR DISCOMFORTS FROM BEING IN THIS RESEARCH?

There are no risks/harms with taking either of these medications in regards to standard endodontic procedures. Neither of these medications have an effect on the outcome of a standard endodontic procedure. Recent scientific reviews have concluded that ibuprofen, given before root canal treatment, increases the effectiveness of a lower tooth nerve block. Our goal is to see if an even greater benefit can be achieved by using the steroid medication methylprednisolone before your starting your procedure.

Although very rare, ibuprofen may cause prolonged bleeding and inflammation of the tongue. Methylprednisolone may cause mouth ulcers or upset stomach. However, there is no known expected harm from a single dose of either ibuprofen or methylprednisolone for those eligible to participate in this research. To further minimize risks, you will be asked to provide; 1.) a thorough medical history and 2.) the names and doses of medications you are presently taking. If you have taken a pain reliever within the past 8 hours, have allergies or sensitivities to ibuprofen or methylprednisolone, have allergies or sensitivities to local anesthetics or sulfites or are pregnant or nursing, please inform the study investigator. If you have a serious medical condition preventing routine dental treatment, a medical condition requiring the use of a steroid medication, or any of the following - peptic ulcers, Crohn's disease, ulcerative colitis, gastroesophageal reflux disease, a systemic fungal infection, an active herpetic infection, asthma, open-angle glaucoma or cirrhosis, please inform the study investigator. Any of these conditions may prevent your participation in this study.

It is possible that personal information could be mistakenly released from the study resulting in a loss of confidentiality. However, the risk of this occurring is very small and every precaution will be taken to prevent this from happening.

4. WHAT ARE THE POSSIBLE BENEFITS FROM THIS RESEARCH?:

The IANB or lower tooth nerve block has been shown to have an effectiveness as low as 25% in patients with irreversible and painful tooth pulpitis. With such a low probability of success, you

may more likely experience pain or require more anesthetic injections to relieve pain during your root canal procedure. By participating in this research study it is possible to receive the benefit of lowered pain both during and after your appointment. This research protocol is based on several recent scientific reviews and clinical trials that demonstrate the benefits of using ibuprofen before a procedure and a steroid medication (methylprednisolone) on post-operative (after the procedure) pain relief. Recent studies have shown that ibuprofen given before a procedure may increase lower tooth nerve blocks effectiveness up to 65%. Our study goal is to test whether a single preoperative dose of steroid such as (methylprednisolone) will have greater benefit than a medication such as ibuprofen.

5. WHAT ARE THE ALTERNATIVES TO TAKING PART IN THIS RESEARCH?

Taking part in the study is your choice. You may choose either to take part or not to take part. If you decide to take part, you may leave the study at any time. No matter what decision you make, there will be no penalty to you and you will not lose any of your benefits.

6. IS THERE COMPENSATION FOR YOUR PARTICIPATION IN THIS RESEARCH?

No, you will not receive any compensation for participating in this study.

7. ARE THERE COSTS FOR PARTICIPATING IN THIS RESEARCH?

No, there are no costs to you for taking part in this research study.

8. WHO IS CONDUCTING THIS RESEARCH?

This study is being conducted by investigators in the Endodontic Dept. at NPDS

9. STUDY SPONSOR (the organizations or persons who oversee the study and are responsible for analyzing the study data):

As the sponsor of this research, the Department of Defense, Walter Reed National Military Medical Center, may have access to your research data in accordance with DoDI 3216.02.

10. SOURCE OF FUNDING:

Funding will be provided by the Postgraduate Dental College of Uniformed Services University of the Health Sciences in support of Dental Residency Training at NPDS.

11. PRINCIPAL INVESTIGATOR (the person(s) responsible for the scientific and technical direction of the study):

Susan E. Hinman, CDR, DC, USN, Endodontics, NPDS, WRNMMC, (301) 319-4676

12. LOCATION OF THE RESEARCH:

This research will be carried out in the Endodontics Dept., 2nd floor, Bldg. 1 of the Naval Postgraduate Dental School, 8955 Wood Rd., Bethesda, MD 20889-5628

13. DISCLOSURE OF FINANCIAL INTERESTS AND OTHER PERSONAL ARRANGEMENTS:

None of the study investigators have a financial or personal involvement with this study.

14. WHO WILL SEE MY INFORMATION (PRIVACY) AND HOW WILL IT BE PROTECTED (CONFIDENTIALITY)?

Records of your participation in this research study may only be disclosed in accordance with state and federal law, including the Federal Privacy Act, 5 U.S.C.552a, and its implementing regulations. DD Form 2005, Privacy Act Statement - Military Health Records, contains the Privacy Act Statement for the records. A copy of DD Form 2005 can be given to you upon request, or you can read on-line at:
http://www.dtic.mil/whs/directives/infomgt/forms/eforms/dd2005.pdf.

The principal investigator will keep your research records. These records may be looked at by staff from the Naval Postgraduate Dental School, Walter Reed (WRNMMC) Department of Research Programs, the Walter Reed (WRNMMC) Institutional Review Board (IRB), the DoD Higher Level Review, and other government agencies, such as the Food and Drug Administration (FDA), as part of their duties.

These duties include making sure that the research participants are protected. Confidentiality of your records will be protected to the extent possible under existing regulations and laws but cannot be guaranteed. Your research records may be disclosed outside of WRNMMC, but in this case, you will be identified only by a unique code number. Information about the code will be kept in a secure location and access limited to authorized research study personnel.

Procedures to protect the confidentiality of the data in this study include but are not limited to: Any data entered into a computer will be maintained on a secure, CAC enabled, password protected, government PC. Hard copies of any data will not include any Personal Identifying Information (PII) and will be maintained in a locked cabinet in Bldg. 1, room 2569 when not in use. Researchers will make every effort to protect your privacy and confidentiality; however, there are risks of breach of information security and information loss.

By signing this document, you give your permission for information gained from your participation in this research study to be published in literature, discussed for educational purposes, and used generally to further science. You will not be personally identified; all information will be presented as anonymous data.

Complete confidentiality cannot be promised for military personnel, because information regarding your health may be required to be reported to appropriate medical or command authorities to ensure the proper execution of the military mission, including evaluation of fitness for duty.

CDR Susan E. Hinman and other study investigators

Those listed above will have access to your records and agree to safeguard your protected health information by using and disclosing it only as permitted by you in this consent or as directed by state and federal law.

15. LONG TERM USE OF DATA

Your private information collected as part of this research study, even if identifiers are removed, will not be used or distributed for future research studies.

16. WHAT HAPPENS IF YOU ARE INJURED AS A RESULT OF THIS RESEARCH?

If you think that you have a research-related injury or illness as a result of participating in this research study, notify your Principal Investigator, Susan E. Hinman, CDR, DC, USN, immediately at (301) 319-4676 or the Human Protections Administrator, Department of Research Programs, at Walter Reed National Military Medical Center at (301) 295-8239 or 301-319-7736.

If you are injured because of your participation in this research and you are a DoD healthcare beneficiary (e.g., active duty military, dependent of active duty military, retiree), you are authorized space-available medical care for your injury within the DoD healthcare system, as long as you remain a DoD healthcare beneficiary. This care includes, but is not limited to, free medical care at DoD hospitals or DoD clinics. If you obtain care for research-related injuries outside of a DoD or DoD hospital or clinic, you will not be reimbursed for those medical expenses. For DoD healthcare beneficiaries transportation to and from hospitals or clinics will not be provided or paid for by DoD. Unless you are covered by TRICARE, no DoD reimbursement is available if you incur medical expenses to treat research-related injuries. No compensation is available for research-related injuries. You are not waiving any legal rights.

17. WHAT HAPPENS IF I WITHDRAW FROM THIS RESEARCH?

You may withdraw your consent at any time and stop participating in this research study without affecting your eligibility for care or any other benefits to which you are entitled. Should you choose to withdraw, you must contact the Principal Investigator in writing and request to withdraw using the mailing address is listed below. If you withdraw from the study any data already collected will remain part of the study database.

If you are receiving treatment as part of this research study, you will no longer be eligible for such research-related treatment. Contact your personal physician to discuss medical treatment for your condition.

Please note that withdrawing your consent to participate in this research does not fully revoke your HIPAA Authorization Form to use/disclose your protected health information. To make

that revocation, please send a letter to the principal investigator as discussed in the HIPAA Authorization Form.

The principal investigator of this research study may terminate your participation in this research study at any time if he determines this to be in your best interest, if you are unable to comply with the procedures required, or if you no longer meet eligibility criteria.

18. VOLUNTARY PARTICIPATION:

The decision to take part in this research study is completely voluntary on your part. You will be informed if significant new findings develop during the course of this research study that may relate to your decision to continue participation.

19. INCIDENTAL FINDINGS

There is a possibility that while reviewing your test results we may see an abnormality that we did not expect to see in this study. This is what is called an "incidental finding."

We will let you know if we see such an incidental finding. Depending on the type of incidental finding, we may contact you by phone. In the case of a potential serious emergency, the researcher will inform you right away.

You do not have an option to decline receiving information about an incidental finding.
A qualified person (usually a member of the research team) will talk to you if there is an incidental finding.

We will also give information about this incidental finding to your primary doctor or we will refer you to an appropriate doctor for further evaluation.

- An incidental finding may cause you to feel anxious
- Since an incidental finding will be part of your medical record, you could face greater difficulty in getting health or life insurance

The costs for any care that will be needed to diagnose or treat an incidental finding would not be paid for by this research study. These costs would be your responsibility. If you are a DoD beneficiary, you will have access to care through standard Military Health System and TRICARE procedures.

AUTHORIZATION TO USE OR DISCLOSE HEALTH INFORMATION THAT IDENTIFIES YOU FOR A RESEARCH STUDY

Principal Investigator (PI) Name and Rank: Susan E. Hinman, CDR

Corps and Service/Organization: Dental Corps, US Navy

Title of Research Study: Comparative Evaluation of Preoperative Methylprednisolone or Ibuprofen on Anesthetic Efficacy of Inferior Alveolar Nerve Blocks in Patients with Symptomatic Irreversible Pulpitis

I. Purpose of this Document

An Authorization is your signed permission to use or disclose your health information. The Health Insurance Portability and Accountability Act (HIPAA) Privacy Rule, as implemented by the Department of Defense (DoD), permits the Military Health System (MHS) to use or disclose your health information with a valid Authorization. The MHS is defined as all DoD health plans and DoD health care providers that are organized under the management authority of, or in the case of covered individual providers, assigned to or employed by, the Defense Health Agency (DHA), the Army, the Navy, or the Air Force. A valid Authorization must include the core elements and required statements as contained in this document.

Please read the information below and ask questions about anything you do not understand before deciding to give permission for the use and disclosure of your health information.

II. Authorization

The following describes the purposes of the requested use and disclosure of your health information:

You are being asked to participate in a randomized clinical trial and research study at the Naval Postgraduate Dental School (NPDS), Walter Reed National Military Medical Center (WRNMMC) because you have a qualifying mandibular posterior tooth in need of root canal therapy. The purpose is to compare the effect of 800mg ibuprofen and 40mg methylprednisolone on anesthetic efficacy of the IANB in patients with symptomatic irreversible pulpitis.

A. What health information will be used or disclosed about you?

We will collect the data collection sheets used to record information on the treatment including preoperative diagnosis, preoperative VAS, and completed treatment. We will also collect the following personal information from you;

Your name, date of birth, telephone number, and email address.

B. Who will be authorized to use or disclose (release) your health information?

The members of the Naval Postgraduate Dental School Endodontic Dept. research team will have access to your health information in order to find out if you qualify to participate in this study, to obtain treatment information, and to analyze the research data. Additionally, your protected health information (PHI) may be made available to health oversight groups such as the WRNMMC Department of Research programs and the WRNMMC Institutional Review Board.

C. Who may receive your health information?

No other individuals or organizations will have access to your health information.

D. What if you decide not to sign this Authorization?

The MHS **will not** condition (withhold or refuse) treatment that is not part of this study, payment, enrollment, or eligibility for benefits on whether you sign this Authorization.

E. Is your health information requested for <u>future</u> research studies?

No, your health information *<u>is not</u>* requested for future research studies.

F. Can you access your health information during the study?

You may have access to your health information at any time, unless your identifiers are permanently removed from the data.

G. Can you revoke this Authorization?

You may change your mind and revoke (take back) your Authorization at any time. However, if you revoke this Authorization, any person listed above may still use or disclose any already obtained health information as necessary to maintain the integrity or reliability of this research.

H. Does this Authorization expire?

Yes, it expires at the end of the research study

I. What else may you want to consider?

No publication or public presentation about the research described above will reveal your identity without another signed Authorization from you.

If all information that does or can identify you is removed from your health information, the remaining de-identified information will no longer be subject to this Authorization and may be used or disclosed for other purposes.

In the event your health information is disclosed to an organization that is not covered by HIPAA, the privacy of your health information cannot be guaranteed.

CONTACT INFORMATION:

Principal Investigator (PI)

The Principal Investigator or a member of the research staff will be available to answer any questions throughout this study.

Principal Investigator: Susan E. Hinman, CDR, DC, USN, Endodontics, NPDS
Phone: (301) 319-4676
Mailing Address: 8955 Wood Rd, Bethesda, MD, 20889-5628

Institutional Review Board (IRB) Office

If you have any questions about your rights as a research participant or if you have concerns or complaints about the research study, please contact the IRB Office at:

Department of Research Programs at WRNMMC
8901 Rockville Pike
Bethesda, MD 20889
(301) 295-8239

IF THERE IS ANY PORTION OF THIS DOCUMENT THAT YOU DO NOT UNDERSTAND, ASK THE INVESTIGATOR BEFORE SIGNING. YOU MAY CONSULT WITH YOUR PERSONAL PHYSICIAN OR LEGAL ADVISOR, IF YOU WISH.

A signed and dated copy of this document will be given to you.

SIGNATURE OF PARTICIPANT

_____
Printed Name of Participant

_____	_____	_____
Signature of Participant	Date	Time

SIGNATURE OF WITNESS TO CONSENT/CONSENT PROCESS
(This individual can be a relative of the participant, but cannot be an individual involved with the research study.)

_____
Printed Name of Witness

_____	_____	_____
Signature of Witness	Date	Time

SIGNATURE OF INDIVIDUAL ADMINISTERING CONSENT
(Can only be signed by an investigator or staff approved to administer consent)

_____
Printed Name of Administering Individual

_____	_____	_____
Signature of Administering Individual	Date	Time